



Method for the manufacture of 3-aminophenol

Description of Technology: The present invention relates to a method for manufacturing the polyfunctional intermediate, 3-aminophenol, and, more particularly, a method comprising dehydrogenating 3-amino-2-cyclohexene-1-one (ACO) with a supported palladium or palladium-platinum catalyst in a solvent in the presence of base to produce 3-aminophenol and its use directly without purification to produce 3,4,-oxydianiline.

Patent Listing:

1. **US Patent No. 5,202,488**, Issued April 13, 1993, "Method for the manufacture of 3-aminophenol"

<http://patft.uspto.gov/netacgi/nph-Parser?Sect2=PTO1&Sect2=HITOFF&p=1&u=%2Fnetacgi%2FPTO%2Fsearch-bool.html&r=1&f=G&l=50&d=PALL&RefSrch=yes&Query=PN%2F5202488>

Market Potential: 3-Aminophenol has been prepared by treating resorcinol with ammonia under pressure, or fusion of metanilic acid with sodium hydroxide at elevated temperatures. Resorcinol is obtained commercially by a complicated sulfonation-caustic fusion process. The above processes require either pressure reactors or use highly corrosive chemicals at elevated temperatures and are laborious. Disposal of the excess reactants and solvents requires expensive cleanup of the waste water streams.

All of the prior art procedures start with purified 3-aminophenol in contrast to the present invention where the quality of the crude aminophenol produced from 3-amino-2-cyclohexene-1-one is sufficiently pure to use directly in the condensation with p-nitrochlorobenzene to produce the corresponding ether in good quality. Most processes that produce 3-aminophenol contain detrimental amounts of by-products which must be removed before further use. The current process produces 3-aminophenol which can be used directly for further reactions without resorting to complex and expensive purification methods.

Benefits:

- Produces no detrimental by-products
- Easier, more efficient process

Applications:

- Manufacture of 3-Aminophenol

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